Title (en)

Wrought product in Al-Cu-Mg alloy for aircraft structural element

Title (de)

Knetprodukt aus Al-Cu-Mg-Legierung für das Strukturbauteil eines Flugzeugs

Title (fr)

Produit corroyé en alliage Al-Cu-Mg pour élément de structure d'avion

Publication

EP 1382698 B1 20040526 (FR)

Application

EP 03356108 A 20030709

Priority

FR 0208737 A 20020711

Abstract (en)

[origin: EP1382698A1] Weldable product, notably rolled, drawn or forged, is made in an alloy with the following composition (by weight %): (a) Cu: 3.8 - 4.3; (b) Mg: 1.25 - 1.45; (c) Mn: 0.2 - 0.5; (d) Zn: 0.4 - 1.3; (e) Fe less than 0.15; (f) Si less than 0.15; (g) Zr at most 0.05; (h) Ag less than 0.01; (i) other elements each less than 0.05 and less than 0.15 in total; (j) remainder Al; (k) treated by putting into solution, tempering and cold drawing, with a permanent deformation of between 0.5 and 15 %, and preferably of between 1.5 and 3.5 %. The cold drawing is achieved by controlled traction and/or cold transformation, such as rolling or drawing. Independent claims are also included for: (i) a plated sheet of this alloy; (ii) an aircraft structural element of this alloy; (iii) a method for the fabrication of a weldable product of this alloy.

IPC 1-7

C22C 21/12; C22C 21/16; C22C 21/18

IPC 8 full level

C22C 21/16 (2006.01); **C22C 21/18** (2006.01); **C22F 1/057** (2006.01)

CPC (source: EP US)

C22C 21/16 (2013.01 - EP US); **C22C 21/18** (2013.01 - EP US); **C22F 1/057** (2013.01 - EP US); Y10T 428/12764 (2015.01 - EP US)

Cited by

CN104711498A; CN104451298A; US8877123B2; WO2008003503A3; US10472707B2; EP2121997B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1382698 A1 20040121; **EP 1382698 B1 20040526**; **EP 1382698 B2 20130109**; AT E267885 T1 20040615; DE 60300004 D1 20040701; DE 60300004 T2 20050120; DE 60300004 T3 20130620; ES 2220902 T3 20041216; ES 2220902 T5 20130509; FR 2842212 A1 20040116; FR 2842212 B1 20040813; US 2004086418 A1 20040506; US 2008210350 A1 20080904; US 7294213 B2 20071113; US 7993474 B2 20110809

DOCDB simple family (application)

EP 03356108 A 20030709; AT 03356108 T 20030709; DE 60300004 T 20030709; ES 03356108 T 20030709; FR 0208737 A 20020711; US 61287803 A 20030707; US 86530007 A 20071001